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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/808,478 | 03/25/2004 | Masayasu Suzuki | 50195-418 | 6313 |

7590 06/27/2005

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| EXAMINER |
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TRAN, DALENA

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| ART UNIT | PAPER NUMBER |
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3661

DATE MAILED: 06/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|--------------------------------------|--------------------------------------|--|
| Office Action Summary | Application No. 10/808,478 | Applicant(s) SUZUKI ET AL. | |
| | Examiner Dalena Tran | Art Unit 3661 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 9-11, 15 and 16 is/are allowed.
- 6) ☒ Claim(s) 1-8 and 12-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>3/25/04, 8/13/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Notice to Applicant(s)

1. This application has been examined. Claims 1-16 are pending.

The prior art submitted on 3/25/04, and 8/13/04 have been considered.

Claim 12, line 4, in the beginning of the line "the follower vehicle" should be "the leader vehicle". Correction is required if needed.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-2, 8, and 13, are rejected under 35 U.S.C. 103(a) as being unpatentable over Taguchi et al. (6,553,288) in view of Maekawa (5,304,980).

As per claims 1 and 13, Taguchi et al. disclose an information providing device installed in a leader vehicle that leads a follower vehicle, for providing the follower vehicle with guidance prepared by the leader vehicle, the information providing device comprising: a state detector configured to detect a state change in the leader vehicle to output a detecting signal (see the abstract; and column 3, lines 3-48). Taguchi et al. do not disclose the guidance including a photographed image of a view ahead of the leader vehicle. However, Maekawa discloses a guidance generator configured to receive the detecting signal from the state detector, the guidance generator configured to prepare, in response to the detecting signal, guidance to guide the follower vehicle, the guidance including a photographed image of a view ahead of the leader vehicle (see columns 4-5,

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lines 9-16). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teach of Taguchi et al. by combining the guidance including a photographed image of a view ahead of the leader vehicle to keep track the plan path of the leader vehicle.

As per claim 2, Taguchi et al. disclose wherein the state detector is coupled to a turn signal installed in the leader vehicle, detects operation of the turn signal and outputs the detecting signal (see columns 3-4, lines 48-10).

As per claim 8, Taguchi et al. disclose the state detector coupled to a lamp switch detects operation of the lamp switch installed in the leader vehicle and outputs the detecting signal (see columns 5-6, lines 10-20). Taguchi et al. do not disclose the guidance includes an image ahead of the leader vehicle photographed when the lamp is turned on. However, Maekawa discloses the guidance includes an image ahead of the leader vehicle photographed when the lamp is turned on (see columns 4-5, lines 9-16). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teach of Taguchi et al. by combining the guidance includes an image ahead of the leader vehicle photographed when the lamp is turned on to determine a position and distance to a leader vehicle so as not to lose sight of the leader vehicle.

4. Claims 3-7, are rejected under 35 U.S.C. 103(a) as being unpatentable over Taguchi et al. (6,553,288), and Maekawa (5,304,980) as applied to claim 1 above, and further in view of Wilhelm Rekow et al. (6,732,024).

As per claim 3, Taguchi et al., and Maekawa do not disclose the guidance generator obtains a directional input to the turn signal. However, Wilhelm Rekow et al. disclose the guidance generator obtains a directional input to the turn signal (see column

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8, lines 5-42). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teach of Taguchi et al., and Maekawa by combining the guidance generator obtains a directional input to the turn signal to guide the vehicle follow the path of the leader vehicle.

Also, as per claims 4-6, Wilhelm Rekow et al. disclose the guidance generator obtains a position of the leader vehicle, the guidance generator obtains time on the leader vehicle, and the guidance generator obtains a running speed of the leader vehicle (see columns 13-14, lines 23-59).

As per claim 7, Taguchi et al. disclose wherein the guidance generator obtains a relative distance between the leader vehicle and the follower vehicle according to a running speed of the leader vehicle (see column 4, lines 11-49). Taguchi et al. do not disclose a position of the leader vehicle related to time, a running speed of the follower vehicle, and a position of the follower vehicle related to time. However, Wilhelm Rekow et al. disclose a position of the leader vehicle related to time, a running speed of the follower vehicle, and a position of the follower vehicle related to time (see columns 8-9, lines 43-11; and column 10, lines 17-39). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teach of Taguchi et al., by combining a position of the leader vehicle related to time, a running speed of the follower vehicle, and a position of the follower vehicle related to time to allow the follower vehicle to determine if an adjustment in the speed and position need to implement in order to follow the leader vehicle.

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5. Claims 12, and 14, are rejected under 35 U.S.C. 103(a) as being unpatentable over Farwell et al. (6,640,164) in view of Taguchi et al. (6,553,288), Maekawa (5,304,980), and Wilhelm Rekow et al. (6,732,024).

As per claims 12, and 14, Farwell et al. disclose an information providing system comprising: a sender used when a vehicle is a leader vehicle that leads a follower vehicle, the sender configured to send guidance for guiding the follower vehicle to the leader vehicle (see column 3, lines 30-44), a presenter installed in the follower vehicle, configured to receive the sent guidance and present guidance (see columns 3-4, lines 45-13; and column 5, lines 6-61). Farwell et al. do not disclose a state detector configured to detect a state change in the leader vehicle. However, Taguchi et al. disclose a state detector configured to detect a state change in the leader vehicle (see the abstract; and column 3, lines 3-48). Farwell et al. also do not disclose a guidance generator. However, Maekawa discloses a guidance generator configured to prepare, in response to the state change detected by the state detector, the guidance including a photographed image of a view ahead of the leader vehicle (see columns 4-5, lines 9-16). and a guidance obtainer configured to obtain guidance including a photographed image of a view ahead of the leader vehicle (see columns 5-6, lines 49-29). Wilhelm Rekow et al. disclose an output unit configured to provide the user with the guidance obtained by the guidance obtainer (see columns 4-6, lines 66-2). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teach of Farwell et al., by combining a state detector, and a guidance generator to determine leader vehicle position, distance and speed to keep track the leader vehicle and to guide the follower vehicle to follow the leader vehicle.

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6. Claims 9-11, and 15-16 are allowable.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

. Iiboshi et al. (5,934,399)

. Saitou et al. (6,128,559)

. Kobayashi (6,313,758)

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dalena Tran whose telephone number is 571-272-6968. The examiner can normally be reached on M-F 6:30 AM-4:00 PM), off every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Black can be reached on 571-272-6956. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Patent Examiner
Dalena Tran

June 22, 2004

